Sustainable production of healthy fish in various aquaculture systems - PROFISH

Project name	**Sustainable production of healthy fish in various aquaculture systems - PROFISH**
Registration number	CZ.02.1.01/0.0/0.0/16_019/0000869-1
Realization date	01/01/2019 — 30/06/2023
Recipient	Veterinary research institute, Brno
Other recipients	University of South Bohemia in České Budějovice – FFPW USB Mendel University
Grant program	OP - EU Operational Programme
Responsible solver	MVDr. Veronika Piačková, Ph.D.

PROJECT ANNOTATION

The project is divided into three objectives: Objective: - **Host-environment relationship** Relationship between the host and environment is a significant interaction not only between the living organism and its environment, but also the technological, zootechnical or nutritional factors. The environment of organisms is influenced not only by external influences, e.g. water pollution by various pollutants, but also by the fish themselves as a source of pollution. Nutrition is an important factor that affects production. Also, the use of antibiotics or other biopreparates affects the quality of the environment and can significantly affect animal health - Objective: **Host-pathogen relationship** The common scientific goal of all the objectives (fish defense mechanisms, pathogen studies, studies of host-pathogen interactions) is to obtain primary data on the immune response of fish and their immune system cells to various types of infections. That makes this goal primarily scientific. At the same time, the results will be used to prepare diagnostic kits for the identification of selected types of pathogens and their use for the compilation of certified methodologies. The expected outcomes are also methods of prevention of selected diseases using experimental vaccines. - Objective: **Environment-pathogen relationship Microbiome of biofilters**: Aquaculture systems with recirculation systems are a worldwide growing agricultural industry, allowing fish to be bred in high numbers even with limited water availability Antibiotic resistance: The aim of the activity is to study resistant bacteria and antibiotic and disinfectant resistance genes in bacterial isolates from fish and environment in relation to breeding character, fish nutrition, use of probiotics, fish stress, consumption of antimicrobials from various functional groups and other factors.

PROJECT BUDGET

	Amount CZK
Total approved costs	95,127 thou.
Public financial support	95,127 thou.
Other public sources	0 thou.
Non public and foreign sources	5,840 thou.

CONTACT

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